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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,287	02/19/2004	Jei-Fu Shaw	08919-104001 / 09A-911128	4293
26161	7590	10/12/2006	EXAMINER KIM, TAEYOON	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ART UNIT 1651	PAPER NUMBER

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,287

Applicant(s)

SHAW ET AL.

Examiner

Taeyoon Kim

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 21-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/19/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-30 are pending.

Election/Restrictions

1. Applicant's election without traverse of Group II (claims 14-20) and species in the reply filed on Aug. 23, 2006 is acknowledged.

The species elected are as follows;

Group (ii): rice

Group (iii): wine

Claims 1-13 and 21-30 are withdrawn from consideration as being drawn to non-elected subject matter. Claims 14-20 have been considered on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14-16, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Steinkraus (Food Control, 1997) in view of α -amylase and glucoamylase from *Aspergillus oryzae*, var. (<http://www.fao.org/ag/agn/jecfa-additives/specs/Monograph1/Additive-028.pdf>).

Claims 14-16, 19 and 20 are drawn to a method for producing a fermentation product from starch-containing produce, comprising treating a starch-containing slurry with a starch hydrolyzing enzyme that hydrolyzes starch to oligosaccharides, a second starch hydrolyzing enzyme which converts starch or oligosaccharides to glucose, and a microorganism that converts glucose to a fermentation product (claim 14); a limitation to the first enzyme being α -amylase and the second enzyme being glucoamylase (claim 15); a limitation to the fermentation product being wine (claims 16 and 19); a limitation to the produce being rice (claim 20).

Steinkraus teaches a method for producing rice wine (sake) by fermenting rice. In this process, boiled rice is overgrown with an amylolytic mold *Aspergillus oryzae*, and then the mold-covered rice (koji) is then inoculated with a culture of the yeast *Saccharomyces cerevisiae* and water (see p. 314, right column, 2nd paragraph). It is an intrinsic property of *Aspergillus oryzae* has both α -amylase and glucoamylase endogenously supported by an article entitled to " α -amylase and glucoamylase from *Aspergillus oryza*, var." Therefore, the reference of Steinkraus teaches the limitation of enzymatic treatment to starch-containing slurry (boiled rice), α -amylase converting starch to oligosaccharides, glucoamylase converting starch and oligosaccharides to glucose yielding glucose-rich syrup, and then a fermentation step by a yeast (microorganism) to produce rice wine.

The discovery of a new use for an old structure based on unknown properties of the structure *might* be patentable to the discoverer as a process of using. *In re Hack*, 245 F.2d 246, 248, 114 USPQ 161, 163 (CCPA 1957). However, when the claim recites

using an old composition or structure and the "use" is directed to a result or property of that composition or structure, then the claim is anticipated. *In re May*, 574 F.2d 1082, 1090, 197 USPQ 601, 607 (CCPA 1978) and *In re Tomlinson*, 363 F.2d 928, 150 USPQ 623 (CCPA 1966). See M.P.E.P. § 2112.02.

Normally, only one reference should be used in making a rejection under 35 U.S.C. 102. However, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to:

- (A) Prove the primary reference contains an "enabled disclosure; "
- (B) Explain the meaning of a term used in the primary reference; or
- (C) Show that a characteristic not disclosed in the reference is inherent.

In this case, extra reference is used to show an inherent characteristic of the thing taught by the primary reference.

M.P.E.P. §2131.01 states that "To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Thus, the reference anticipates the claimed subject matter.

3. Claims 14-16, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwano et al. (JP 10-248562; published on September 22, 1998).

Iwano et al. teach a method to produce rice wine from steamed rice by using exogenous enzymes such as α -amylase and glucoamylase, and a fermentation step (see Detailed Description, paragraphs 1-11). Although Iwano et al. do not disclose glucose-rich syrup, the treatment with amylolytic enzymes (α -amylase and glucoamylase) in the method of Iwano et al. would have intrinsically generated glucose-rich syrup from steamed rice.

Thus, the reference anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwano et al. (supra).

Claims 17 and 18 are drawn to a limitation to the method of claim 16 wherein the produce being treated with α -amylase, insoluble materials being removed, and the starch hydrolysate-containing solution being treated with glucoamylase, and the glucose-rich syrup being treated with the microorganism to obtain the fermentation product (claim 17); a limitation to the produce being rice (claim 18).

Iwano et al. teach the limitation of claim 16 and the produce being rice (see above).

Iwano et al. do not specifically teach steps of treatment with α -amylase followed by removal of insoluble materials, and then treatment with glucoamylase.

M.P.E.P. § 2144 recites, "The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law...If the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court." In *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946), the court found that selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results. In *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930), the court found that selection of any order of mixing ingredients is *prima facie* obvious.

Therefore, the invention as a whole would have been *prima facie* obvious to a person of ordinary skill at the time the invention was made.

Conclusion

No claims are allowed.

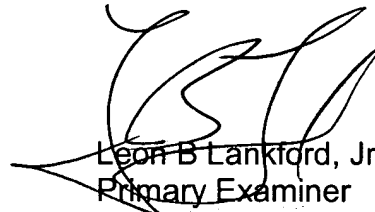
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taeyoon Kim whose telephone number is 571-272-9041. The examiner can normally be reached on 8:00 am - 4:30 pm ET (Mon-Fri).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Taeyoon Kim
Patent Examiner
Art Unit 1651



Leon B Lankford, Jr
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